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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,453	01/15/2004	Junichiro Suzuki	031331	5057

23850 7590 11/03/2005

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EXAMINER

BRUENJES, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/757,453

Applicant(s)

SUZUKI ET AL.

Examiner

Christopher P. Bruenjes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040115</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the limitation "in which fuel is adapted to flow" in line 2 renders the claim vague and indefinite. It is not understood if fuel is being claimed, and it is not understood how fuel can be adapted to flow. Does this limitation pertain to the viscosity of the fuel? It appears that this limitation is supposed to be limiting the tubular inner layer to being adapted for the flow of fuel. Therefore, it is suggested that the limitation be changed to read "which is adapted for the flow of fuel".

Claims 2-8 are rejected as because they contain the limitation that renders claim 1 indefinite by being dependent on claim 1.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishino et al (USPN 6,089,278) in view of Nishi et al (US 2002/0104575 A1).

Nishino et al teach an automotive fuel hose (col.1, 1.8-10) comprising an inner layer (reference number 10, Figure 1) comprising a fluororesin, a low fuel permeability layer (reference number 12, Figure 1) provided about an outer

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peripheral surface of the inner layer comprising a polyester resin having a naphthalene ring such as polybutylene naphthalate, and an adhesive layer (reference number 11, Figure 1) for bonding the inner layer and the low fuel permeability layer (see abstract). The adhesive layer is a blend of fluoro-resin, polyester, polyamide and compatibilizer such as a miscibilizer including an epoxy compound, acid anhydride, oxazoline group, isocyanate group, carboxylic acid group, or amino group (col.9, 1.27-48).

Nishino et al fail to teach that the fluoro-resin forming the inner layer has a functional group. However, Nishi et al teach that fluoro-resin has a low adhesive property and has inadequate bond strength to most other materials including polyamide and polyesters (p.1, paragraph 6). Nishi et al teach that in order to provide fluoro-resins with enhanced melt adhesiveness an adhesive functional group is incorporated into the fluoro-resin (p.2, paragraphs 23, 26, and 27). Nishi et al teach that the adhesiveness-imparting functional group is selected from the group consisting of an epoxy group, a hydroxyl group, a carboxylic anhydride residual group, and a carboxylic acid group (p.2, paragraphs 28 and 31). One of ordinary skill in the art would have recognized that an adhesive functional group is added to a fluoro-resin in order to improve the

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adhesiveness of the fluororesin to other non-fluororesin materials such as polyamides and polyester since fluororesins not containing the adhesive functional groups lack adequate bond strength to materials like polyamide and polyester, as taught by Nishi et al.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to add a functional group selected from the group consisting of epoxy group, hydroxyl group, carboxylic anhydride residual group, and carboxylic acid group, in order to provide the fluororesin with increased adhesiveness to materials like polyester and polyamide, since fluororesins are known in the fuel hose art to possess inadequate adhesiveness to polyamide and polyester, as taught by Nishi et al.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito et al (US 2003/0098085 A1) teaches all of the limitations of claims 1-8 but has the same inventive entity as the instant application and the publication date is less than a year from the effective filing date of the instant application. Rober et al (USPN 5,474,822) and Kodama et al (USPN 5,937,911)

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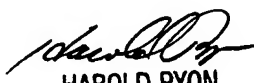
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher P Bruenjes
Examiner
Art Unit 1772

CPB
October 24, 2005


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

10/31/05